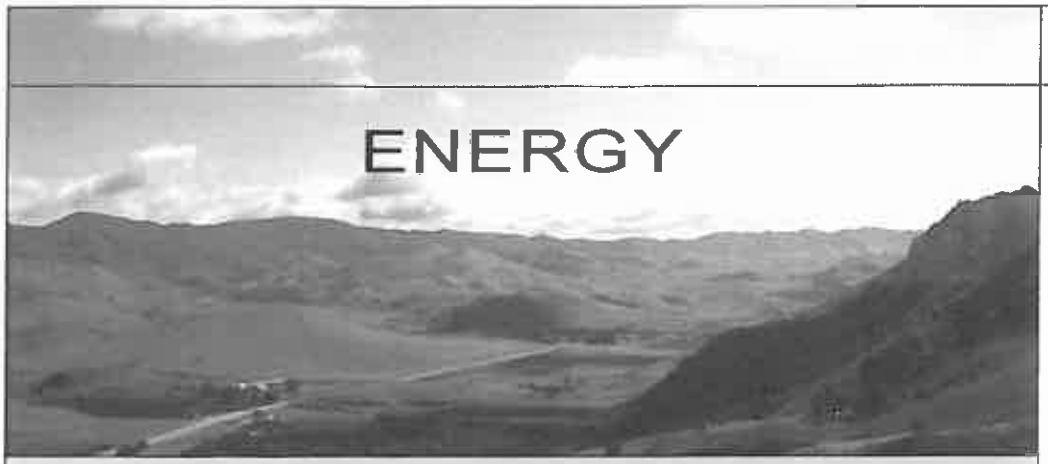
ENERGY



Purpose

The County seeks to provide a framework for moving toward an energy future that transitions from traditional, non-renewable fossil fuel energy sources, to the production of environmentally sustainable, renewable energy supplies that do not degrade ecosystems.

Introduction

The production, transportation, cost, and use of energy affects us all. Energy issues have a profound effect on ecosystems, global climate, commerce, the provision of public services, land use planning, and development, transportation, and quality of life. Using energy more efficiently will benefit residents and businesses economically and reduce environmental impacts. Changes in land use patterns, transportation systems, building designs, agricultural practices, human behavior, and recycling efforts can all lead to greater energy production, efficiency, and conservation.

San Luis Obispo County has abundant resources that can be and are used to generate energy. These include a mix of renewable and non-renewable sources: crude oil and gas, biomass fuels, geothermal, wind, tidal, wave, solar energy, and micro-hydroelectric potential. Crude oil and gas are exported out of the county for refining and distribution. Only a small portion of the wind, solar, and biomass potential in the county is currently used. ~~Where the significant environmental consequences can be avoided, t~~The development of local resources may offer the best alternatives to importing large amounts of energy from other areas of the state.

Sustainable development *is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

-Report of the World Commission on Environment and Development: ***Our Common Future*** *(also known as the* ***Brundtland Commission*** *or Brundtland Report)*

We will recognize success when...

- *Energy consumption in County buildings and facilities is reduced by 15 percent by 2020.*
- *Green building practices are used in all new development and remodels.*
- *A program is in place to retrofit existing buildings using green building practices.*
- *Waste reduction, reuse and recycling program is in effect to divert 70% of waste in unincorporated areas by 2015.*
- *A variety of environmentally sound renewable energy systems are in operation, including solar power and wind energy systems and cogeneration facilities, with a combination of commercial systems and distributed energy resources.*
- *Energy consumption is reduced through conservation and efficiency measures, development of environmentally sound renewable energy sources, and location of most new housing in compact urban neighborhoods near jobs, services and transportation.*

- ~~avoiding~~ reducing significant impacts to sensitive biological and natural resources from nonrenewable and resource-consumptive energy sources; and
- securing a vibrant economic future that relies on sustainable energy resources.

Relationship to Other Elements, Plans, and Programs

This chapter contains specific energy policies; however, all chapters of the Conservation and Open Space Element and all elements of the General Plan must work together to form a cohesive set of goals and policies that manage and sustain the county's resources for generations to come. The County's Guiding Principles for Strategic Growth address the interconnection of land use, resource conservation, and quality of life. The Land Use Element's Framework for Planning (Inland and Coastal) reflects the County's desired Strategic Growth principles and goals. The following energy goals, policies, and implementation strategies are compatible and consistent with the Strategic Growth principles and provide specific direction to achieve and maintain the county's desired ~~air quality~~energy resources. Other chapters of this Element also include goals, policies, and implementation strategies that will directly and indirectly affect energy, notably those included in the Air Quality and Water Resources chapters.

Major Issues

The following major issues are derived from the 1995 Energy Element and the changes in state law since that time. The major issues described in that Element are still applicable, and include energy conservation and efficiency, sustainable energy supplies, renewable energy sources, and green building.

1) Energy conservation and efficiency means using energy more wisely. There are many opportunities to do so, including developing compact land use patterns, also known as "Strategic Growth," discouraging reliance on auto travel, and encouraging more walkable places and better public transit. Other ways to use energy more

efficiently include constructing more energy-efficient and passive solar-powered homes and businesses, ensuring that County operations are as energy-efficient as possible, and expanding recycling and reuse programs.

2) A ~~local~~ sustainable energy supply will include greater reliance on renewable energy sources such as solar and wind power. County operations are specifically targeted to pursue environmentally sustainable local energy supplies.

3) An increase in the use of renewable energy resources ~~to generate a local supply of sustainable energy~~ will require some revisions to County ordinances and policies. The revisions will seek to facilitate the use of renewable energy such as wind, solar, geothermal and cogeneration.

4) In 2006, electricity and natural gas consumption by residential, commercial, and industrial uses in the unincorporated areas of the county contributed 24% of total community-wide greenhouse gas emissions. Green building seeks to improve building practices to make them more sustainable by conserving water; providing most of their own heating, cooling, ventilation, and daytime lighting; minimizing waste; preventing pollution; and improving indoor air quality.

Goals, Policies, and Implementation Strategies

The intent of the following goals, policies, and implementation strategies is to identify energy needs, conserve and use energy efficiently, use ~~local,~~ renewable energy, and achieve energy-efficient development. The County recognizes that efficient use of energy and greater reliance on clean, renewable energy benefits the health of our residents, visitors and environment, and contributes to the county's and the region's economic vitality.

TABLE E-1
ENERGY GOALS

Goal E 1	The County will have an environmentally sustainable, ~~local~~ supply of energy for all county residents.
Goal E 2	Energy consumption at County facilities will be reduced by 20% from 2006 levels by 2020.
Goal E 3	Energy efficiency and conservation will be promoted in both new and existing development.
Goal E 4	Green building practices will be integrated into all development.
Goal E 5	Waste reduction, reuse, and recycling will achieve as close to zero waste as possible.
Goal E 6	The use of renewable energy resources will be increased.
Goal E 7	Design, siting, and operation of non-renewable energy facilities will be environmentally appropriate.

GOAL 1 THE COUNTY WILL HAVE AN ENVIRONMENTALLY SUSTAINABLE, ~~LOCAL~~ SUPPLY OF ENERGY FOR ALL COUNTY RESIDENTS.

Policy E 1.1 Meeting energy needs

Meet our electricity needs through the following prioritized measures:

a. Increased conservation and efficiency in all sectors of energy use.

b. Development and use of locally appropriate sources of renewable resources from both distributed and large-scale projects. Examples include ~~such as~~ wind, tidal, wave, solar, micro-hydroelectric, biomass, and geothermal.

c. Development of non-renewable sources of energy. ~~Where impacts to reso~~urces can be avoided or mitigated,

~~use of distributed power and larger-scale renewable projects.~~

Policy E 1.2 Local control
Assert more local control of energy decisions and sources.

- ***Implementation Strategy E 1.2.1 Evaluate Community Choice Aggregation***
  Determine if Community Choice Aggregation (CCA) or a similar program is a cost-effective and low-risk strategy to increase use of renewable energy, and realize a low-carbon, local energy portfolio. Evaluate CCA for the ability to

  - develop local energy resources that can feasibly supply heat and electricity to the county;
  - determine the financial framework that provides the lowest cost funding for this portfolio;
  - take actions necessary to provide access to the funding; and
  - create public-private partnerships to construct, operate and maintain the new energy resources as public works projects

- ***Implementation Strategy E 1.2.2 Update the Countywide Emergency Energy Contingency Plan***
  Update the existing Countywide Emergency Energy Contingency Plan to meet peak electricity and natural gas needs of essential facilities within the county at all times. The plan should evaluate and determine essential energy priorities and establish a strategy for meeting these priorities during periods of energy shortage.

- ***Implementation Strategy E 1.2.3 Use of tax assessments to retrofit residential and commercial properties***
  Consider implementation of an "AB 811" or municipal financing program that would enable the County to use tax assessment districts and provide low-interest loans to property owners for the installation of energy efficiency improvements and renewable energy sources that are permanently fixed to

Community Choice Aggregation: *Assembly Bill 117 permits municipalities to aggregate and provide electricity to residents, businesses, and public facilities. Investor-owned utilities (IOUs) continue to own and operate the transmission and distribution system, and provide metering, billing, and other customer service functions.*

AB 811 *authorizes all cities and counties in California to designate areas within which willing property owners could enter into contractual assessments to finance the installation of distributed renewable generation or energy efficiency improvements, that are permanently fixed to the property owner's existing residential, commercial, industrial, or other real property. These financing arrangements allow property owners to finance renewable generation and energy efficiency improvements through low-interest loans that would be repaid as an item on the property owner's property tax bill.*

existing real property within the county. Develop the program as directed by AB 811.

↓ ***Implementation Strategy 1.2.4 Renewables Portfolio Standard***
Assess local renewable energy resources and establish a countywide goal for renewable energy sources in conjunction with other counties. The goal will take maximum advantage of ~~locally~~ available renewable energy resources.

Policy E 1.3 Renewable energy and County facilities
Seek to use renewable energy to power County facilities.

Renewable energy *is energy from sources that regenerate and are generally less damaging to the environment, such as solar, wind, biomass, and small-scale hydroelectric power.*

↓ ***Implementation Strategy E 1.3.1 Use of renewable energy at County facilities***
Retrofit existing County facilities with appropriate renewable energy and clean technologies such as L.E.D. lighting, solar, wind, biofuel, cogeneration, and fuel cells.,.

↓ ***Implementation Strategy E 1.3.2 Fund renewable energy at County facilities***
Seek tax-free, low-interest loans, and other available financial options or grants to fund renewable energy projects.

↓ ***Implementation Strategy E 1.3.3 Assess County's use of renewable energy sources and set a target***
Within 12 months of adoption of this Element, identify the County's use of renewable sources for energy use using 2006 as the baseline year and set a target for use of renewable and clean distributed generation sources by 2020.

↓ ***Implementation Strategy E 1.3.4 Renewable Energy and Clean Distributed Generation Plan***
Upon identification of a baseline and target for the County's use of renewable sources for energy use in County facilities, develop a plan to achieve the 2020 target, ~~using a distributive approach to generation.~~

Policy E 1.4 Methane
Increase the use of methane as an energy source from wastewater treatment plants and active and inactive, closed landfills.

↓ ***Implementation Strategy E 1.4.1 Capture methane from landfills and wastewater treatment facilities***
Encourage landfill and wastewater treatment operators to capture and use methane for energy production where feasible. Land use permit applications for landfill expansions, new wastewater treatment facilities, and amendments to previous permits shall propose the capture and use of methane for energy production where feasible.

Policy E 1.5 Waste burning
Encourage waste-burning biomass facilities and conversion technologies as methods of producing electrical energy without endangering resource recovery programs where environmental and air quality are protected ~~impacts can be mitigated~~ and the facility is compatible with adjoining uses.

GOAL 2 **ENERGY CONSUMPTION AT COUNTY FACILITIES SHALL BE REDUCED BY 20% FROM 2006 LEVELS BY 2020.**

Policy E 2.1 Energy efficiency
Become a model of energy efficiency and conservation in the provision of services and the maintenance of County facilities and equipment to:

a. demonstrate to County residents and businesses the benefits of energy efficiency and conservation,

b. reduce costs of government,

c. reduce dependence on imported fossil fuel energy, and

d. improve air quality.

↓ ***Implementation Strategy E 2.1.1 Apply Energy Use Policy to all County facilities***
Amend the Energy Use Policy for County buildings and facilities operated, managed, or leased by General Services to apply to all buildings and facilities operated by the County. The amended Energy Use Policy should identify energy conservation, energy efficiency, demand reduction, distributed

Life cycle costing (LCC) *is the process of evaluating the total overall costs and benefits of buildings or equipment over time, including initial costs of design and construction; operating costs; long-term costs of maintenance, repair and replacement; and other environmental or social costs over its full life, rather than simply based on purchase cost alone.*

c. Uses sustainable materials for pipes

d. Uses spacing, sizes, and modular dimensions that minimize lumber use and optimize performance

e. Uses recycled aggregate in concrete

f. Uses straw bale construction in exterior walls.

GOAL 6 THE USE OF LOCAL RENEWABLE ENERGY RESOURCES WILL BE MAXIMIZED AS PART OF AN OVERALL ENERGY PORTFOLIO.

Policy E 6.1 Sustainable energy sources

Promote the development of sustainable energy sources and renewable energy projects through streamlined planning and development rules, codes, processing, and other incentives.

↓ ***Implementation Strategy E 6.1.1 Eliminate obstacles to renewable energy use in the County***

Revise County policies and regulations as needed by the end of 2010 to eliminate barriers to or unreasonable restrictions on the use of renewable energy.

Policy E 6.2 Commercial solar and wind power and other renewable energy systems

Encourage and support the development of solar and wind power and other renewable energy systems as commercial energy enterprises, ~~where visual and environmental impacts can be mitigated. Assess proposed renewable commercial energy facilities by evaluating the need for renewable sources of energy against the open space, scenic, habitat, and agricultural value of the locations of proposed facilities.~~

↓ ***Implementation Strategy E 6.2.1 Review of large solar projects***

Evaluate large-scale commercial solar projects (i.e. over 10 MW) to favor technologies that maximize the facility's power production and minimize the physical effects of the project. Physical effects include, but are not limited to, noise, area of land disturbance and water use.

Energy facilities *include but are not limited to the following renewable energy projects: solar power generating facilities, waste-burning biomass facilities, wind energy development, and hydroelectric facilities.*

Fossil fuel facilities *include, but are not limited to oil and gas wells, separators, and refineries.*

- ***Implementation Strategy E 6.8.2 Renewable energy combining designation***
  Amend the Framework for Planning, the Area Plans, and the Land Use Ordinance (LUO) by establishing and applying a Renewable Energy (RE) combining designation based on the mapping in Energy Implementation Strategy 6.8.1. The RE designation and implementing LUO standards are to:

  a. Encourage the development of renewable energy while maintaining a high level of environmental quality;

  b. Avoid areas that are not appropriate for renewable energy due to existing incompatible uses; and

  c. Protect areas of renewable energy resources, as well as existing and expanding renewable energy projects, from encroachment by incompatible land use categories and development.

Policy E 6.9 Renewable Energy Facility Siting

Renewable energy is developed most effectively where sufficient renewable energy resources exist (e.g. solar energy requires a certain amount of sunlight to be efficient and wind energy requires a certain amount of wind.) In areas where renewable energy resources have been identified and mapped pursuant to Policy E 6.8, renewable energy development is dependent on the mapped resource and shall be given high priority while balancing the protection of other environmental resources.

~~For proposed solar facilities that will generate more than 10 kW of power, the following apply.~~

~~1) Land use permit applications will include the following:~~

~~a. Identification of an adequate source of water for the facility, and methods to implement best practices for water conservation.~~

~~b. A complete description of the type of solar facility that will be employed, including an analysis of the tracking system (if appropriate) showing that no concentrated~~

~~reflections are directed at occupied structures, recreation areas, or roads.~~

~~2) Where solar power systems will create high concentrations of heat and light, require that the design and operation of the proposed facility reasonably mitigate any adverse effects on birds, fish, and other wildlife or their habitats.~~

GOAL 7 DESIGN, SITING, AND OPERATION OF NON-RENEWABLE ENERGY FACILITIES WILL BE ENVIRONMENTALLY APPROPRIATE.

Policy E 7.1 Energy Facility Siting

Energy, fossil fuel, and related facilities will be sited, constructed, and operated in a manner to protect the public from potential hazards and significant environmental impacts.

↓ *Implementation Strategy **E 7.1.1** Energy facility **design, siting, and operation standards***

Amend the Land Use Ordinance and the Coastal Zone Land Use Ordinance as needed in order to accomplish the following objectives and codify the following requirements. Until the County adopts the ordinance amendments, ~~implement~~ use the following objectives and requirements ~~as though they are standards.~~ to guide the review of development projects. ~~When the language is discretionary (e.g., it states that something "should" be done or is to be "considered" or "encouraged"), implement the language as a guideline.~~

General

1) Proposed new and major additions to energy and fossil fuel facilities will provide a sufficient buffer zone from existing or proposed human populations, with special consideration given to those who cannot be quickly evacuated to safety, such as the disabled and elderly. To establish a buffer zone, a comprehensive risk analysis should be completed.

2) Underground all existing electrical distribution lines on the project site up to the transformer, to the point of onsite use, or to the point of interconnection to the utility. California Public Utilities Commission standards should be considered during the review process.

3) Continue to maintain, operate, monitor, and repair the facility so that it does not constitute a public safety hazard or an environmental threat.

4) Employ the best reasonably achievable techniques available to prohibit disruption of environmentally sensitive areas such as wetlands, animal or bird refuges, or habitat of species of special concern. Avoid impacts to habitat of rare, threatened, or endangered species.

5) Locate new or expanded facilities outside sensitive view corridors, scenic, or recreational areas.

6) If the proposed location visually impacts views of the site from public roads or lands, prepare a screening plan to minimize visual impacts.

7) All exterior lighting shall be energy efficient and shielded to not extend beyond the site.

8) Avoid or otherwise fully mitigate impacts to significant archeological, paleontological, agricultural, or historic resource sites.

9) Locate proposed facilities in a geologically stable areas.

10) Require that all existing facilities and activities are in compliance with all previous permit conditions and all applicable laws prior to authorizing any new expansion.

11) Facilities shall not degrade surface or groundwater resources.

Electric and magnetic fields

12) Consider electric and magnetic fields (EMF) in planning for expansion, siting, and construction of future electric facilities. Apply EMF standards established by the California Energy Commission and the California Public Utilities Commission.

13) Monitor research and policy developments concerning electric and magnetic fields. If exposure standards are established in the future by state and federal agencies, consider including them in applicable ordinances.

Transmission lines in the rural area

Consolidation of energy facilities

14) Require consolidation of energy facilities in any expansion or modification project to the maximum extent technically, environmentally, and economically feasible. Require concurrent processing of the proposed facilities when appropriate to avoid or reduce project and cumulative impacts.

15) When new sites are needed for industrial or energy-related development, expansion of facilities on existing sites (or on land adjacent to existing sites) will take priority over new, undeveloped sites. Exceptions will only be allowed when it can be shown that:

a. Existing and adjacent locations are infeasible and the environmental impacts of opening up a new site are less than the impacts of expansion on or adjacent to existing sites.

b. To do otherwise would adversely affect the public welfare.

c. Adverse environmental impacts are mitigated to the maximum extent feasible.

16) Construction and/or expansion of new energy, fossil fuel, or industrial processing facilities at consolidated sites will be considered only if proposed facilities are not redundant. Operators and owners of such sites shall make their facilities and property available for commingled processing and consolidation of oil and gas facilities on an equitable and non-discriminatory basis.

Extended reach facilities

17) An application for a land use permit for a project including onshore extended reach facilities for the purpose of exploring or developing offshore oil or gas resources may be approved only after a specific plan, as described in government code section 65450 et seq., for overall development of the parcel has been approved.

18) If extended reach facilities are proposed, surface disturbance should be minimized by consolidating the